

APPENDIX 'A'

GEOTECHNICAL REPORT

APPENDIX 'A' - GEOTECHNICAL REPORT

GEOTECHNICAL REPORT FOR:

- i) Legion Memorial Park

The geotechnical report is provided to aid in the Contractor's evaluation of the existing pavement structure and/or soil conditions. The information presented is considered accurate at the locations shown on the Drawings and at the time of drilling. However, variations in pavement structure and/or soil conditions may exist between test holes and fluctuations in groundwater levels can be expected seasonally and may occur as a result of construction activities. The nature and extent of variations may not become evident until construction commences.



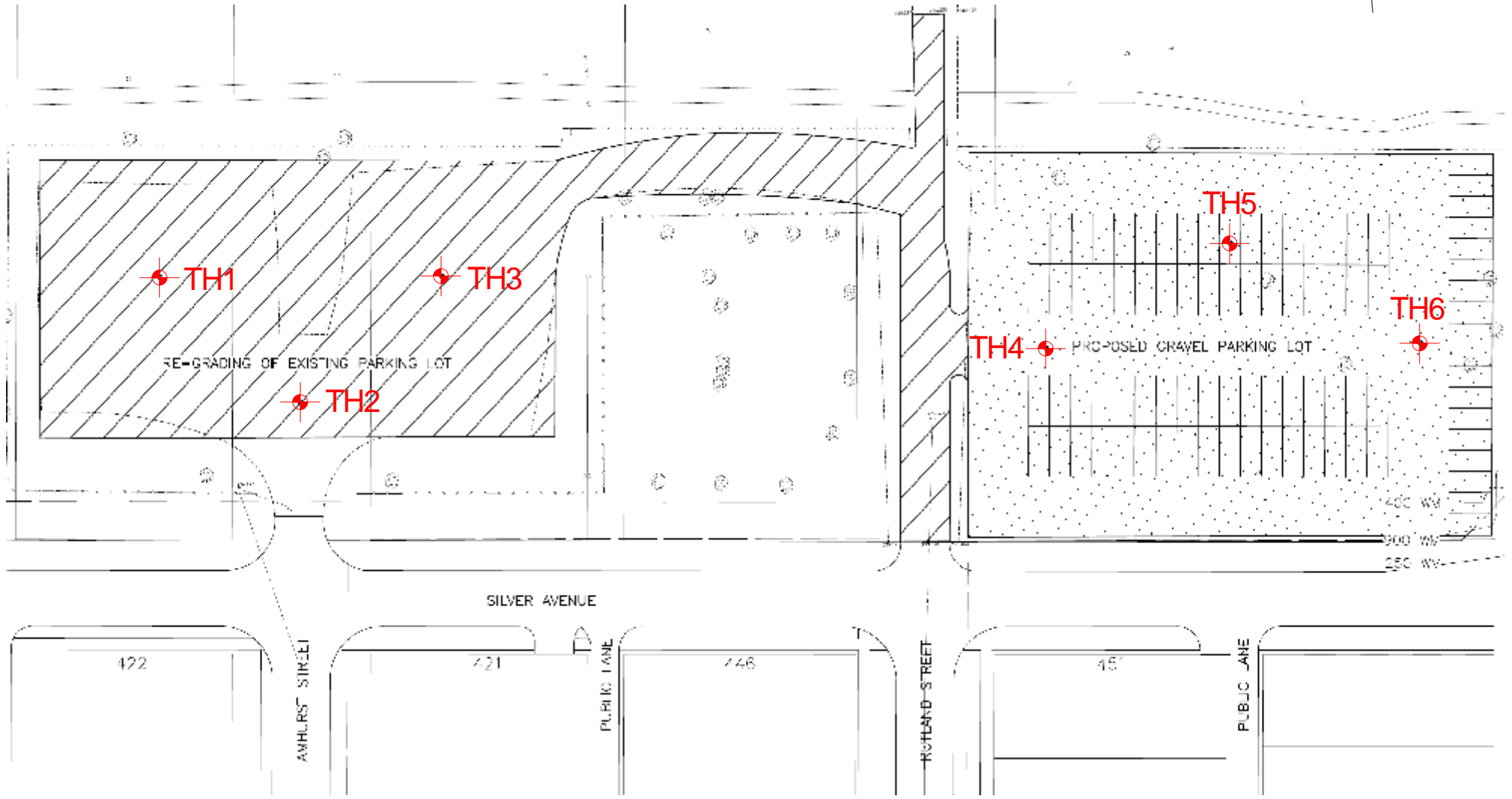
**LEGION MEMORIAL PARK
PARKING LOT EXPANSION AND ASSOCIATED WORKS
GEOTECHNICAL INVESTIGATION**

Prepared for
**CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
106 – 1155 PACIFIC AVENUE
WINNIPEG, MANITOBA
R3E 3P1**

Prepared by
**THE NATIONAL TESTING LABORATORIES LIMITED
199 HENLOW BAY
WINNIPEG, MANITOBA
R3Y 1G4**

June 15, 2011

⊕ Testhole location



**THE
NATIONAL
TESTING
LABORATORIES
LIMITED**
Established in 1923

Project No. COW-1108

Drawn by: NB

Figure: 1

Testhole Location Plan
Legion Memorial Park
Winnipeg, Manitoba

Date: June 6, 2011

Reviewed by: AP

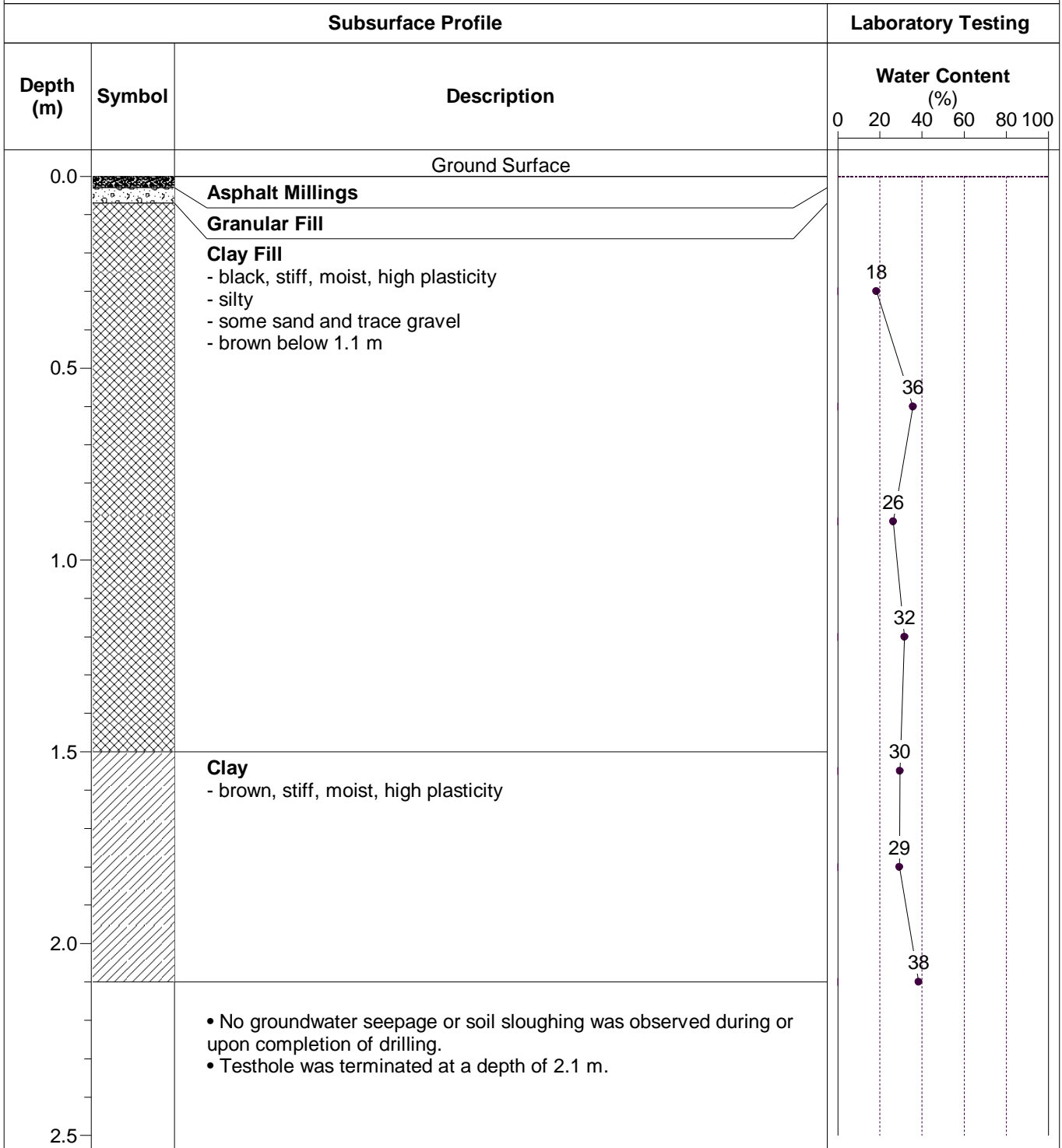
Scale: NTS

TESTHOLE TH1



Project Name: Legion Memorial Park
 Client: City of Winnipeg
 Drilling Contractor: Active Drilling and Piling

Date Drilled: May 27, 2011
 Depth of Testhole: 2.1 m
 Logged by: Hilario Presado

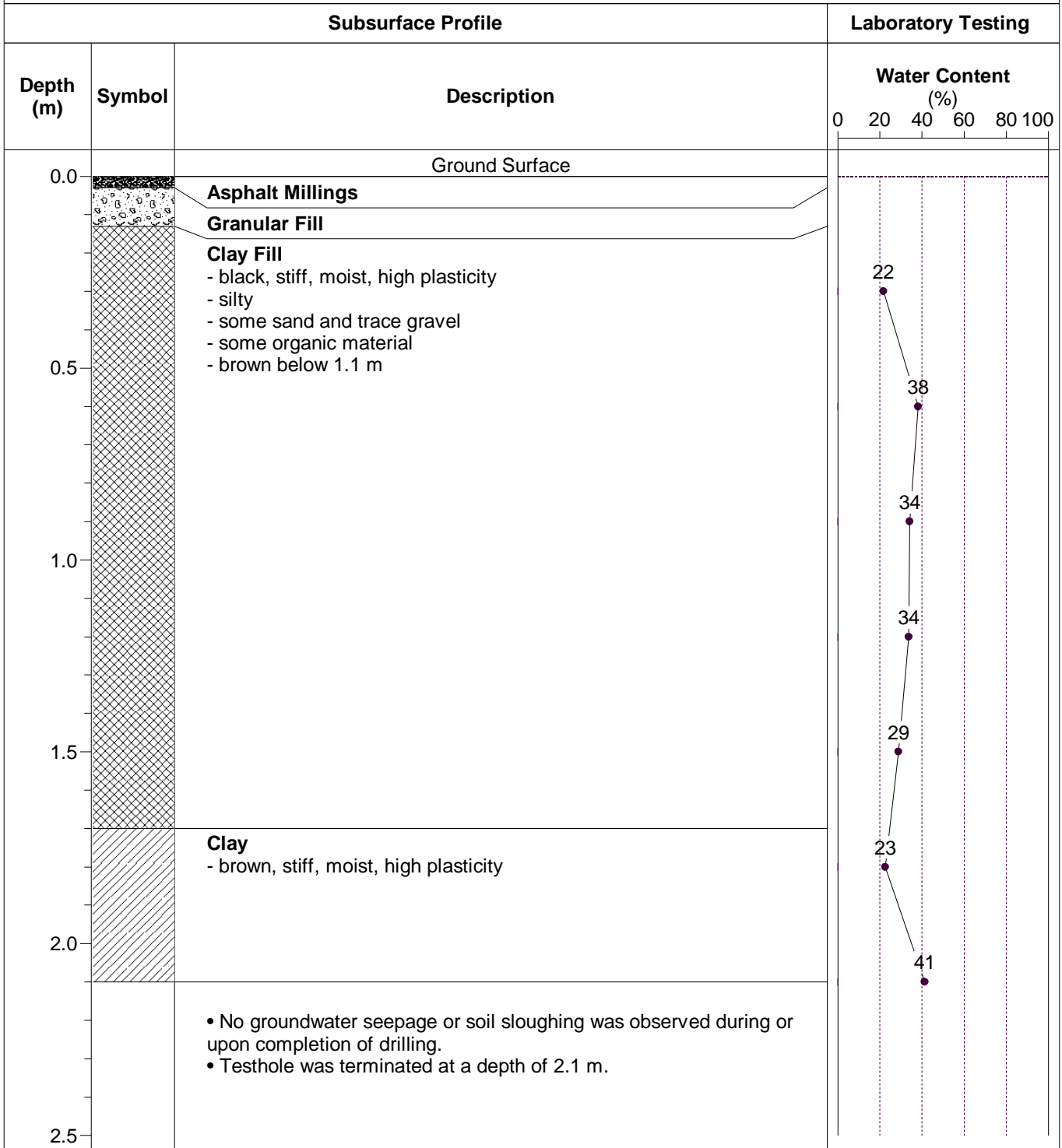


TESTHOLE TH2



Project Name: Legion Memorial Park
 Client: City of Winnipeg
 Drilling Contractor: Active Drilling and Piling

Date Drilled: May 27, 2011
 Depth of Testhole: 2.1 m
 Logged by: Hilario Presado



TESTHOLE TH3



Project Name: Legion Memorial Park
 Client: City of Winnipeg
 Drilling Contractor: Active Drilling and Piling

Date Drilled: May 27, 2011
 Depth of Testhole: 2.1 m
 Logged by: Hilario Presado

Subsurface Profile			Laboratory Testing					
Depth (m)	Symbol	Description	Water Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	LL				
0.0		Ground Surface						
		Asphalt Millings						
		Granular Fill						
		Clay Fill - black, firm, moist, high plasticity - silty - some sand and trace gravel - some organic material - brown, stiff, with trace sand below 1.1 m	28	39	0.8	11.8	26.5	60.9
0.5			39					
1.0			35					
1.5			31					
		Clay - brown, stiff, moist, high plasticity	46					
2.0			39					
2.5		<ul style="list-style-type: none"> No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Testhole was terminated at a depth of 2.1 m. 						

TESTHOLE TH4



Project Name: Legion Memorial Park
 Client: City of Winnipeg
 Drilling Contractor: Active Drilling and Piling

Date Drilled: May 27, 2011
 Depth of Testhole: 2.1 m
 Logged by: Hilario Presado

Subsurface Profile			Laboratory Testing					
Depth (m)	Symbol	Description	Water Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	LL				
0.0		Ground Surface						
0.0 - 0.1		Topsoil						
0.1 - 1.1		Clay Fill - black, firm, moist, high plasticity - silty - some sand and organic material	39	56	0.3	11.5	30.3	57.9
1.1 - 1.7		Clay - brown, firm, moist, high plasticity - silty - some organic material - stiff below 1.7 m	48	40				
1.7 - 2.1			37	42				
2.1		<ul style="list-style-type: none"> No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Testhole was terminated at a depth of 2.1 m. 	41					

TESTHOLE TH5



Project Name: Legion Memorial Park
 Client: City of Winnipeg
 Drilling Contractor: Active Drilling and Piling

Date Drilled: May 27, 2011
 Depth of Testhole: 2.1 m
 Logged by: Hilario Presado

Subsurface Profile			Laboratory Testing					
Depth (m)	Symbol	Description	Water Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	LL				
0.0		Ground Surface						
0.0 - 0.6		Topsoil Clay Fill - black, firm, moist, high plasticity - some silt and organic material - trace sand	50	45	0.0	1.2	8.3	90.5
0.6 - 1.1			39					
1.1 - 2.1		Clay - brown, stiff, moist, high plasticity - silty - trace organic material	36	40				
2.1			43					
2.1			41					
2.5		<ul style="list-style-type: none"> No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Clay fill at 0.6 m tested for Atterberg limits has a liquid limit of 103%. Testhole was terminated at a depth of 2.1 m. 						

TESTHOLE TH6



Project Name: Legion Memorial Park
 Client: City of Winnipeg
 Drilling Contractor: Active Drilling and Piling

Date Drilled: May 27, 2011
 Depth of Testhole: 2.1 m
 Logged by: Hilario Presado

Subsurface Profile			Laboratory Testing					
Depth (m)	Symbol	Description	Water Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	LL				
0.0		Ground Surface						
0.0 - 0.6		Topsoil						
0.6 - 2.1		Clay Fill - black, firm, moist, high plasticity - silty - some organic material to 0.6 m - brown, stiff, with trace sand and gravel below 0.6 m	41	42	0.2	6.1	11.4	82.3
0.5								
1.0			35					
1.1			35					
1.5			34					
2.0		Clay - brown, stiff, moist, high plasticity	38					
2.1			42					
2.5		<ul style="list-style-type: none"> No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Testhole was terminated at a depth of 2.1 m. 						